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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,051	10/12/2001	Michael D. Mosk	88196/00-143	1803

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EXAMINER

BOCKELMAN, MARK

ART UNIT

PAPER NUMBER

3762

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/977,051

Applicant(s)

MOSK ET AL.

Examiner

Mark W Bockelman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty, in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al USPN 6,302,874. Zhang et al teaches the application of electrical energy in the form of electroporation pulses simultaneously applied with ultrasound (see column 9, lines 46-47) along with ascorbic acid to enhance collagen production.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 14- 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al (alone or alternatively in view of Alvarez et al “The healing of superficial skin wounds is stimulated by external electrical current”).

While Zhang et al teaches the application of ascorbic acid to wounds in the background of the invention, he does not teach the application of his electroporation/ultrasound method to a preexisting wound. However, the examiner considers it obvious to have applied the method to a wound that was created by injury since his method deals with healing the skin via collagen formation. Alternatively to have produced a wound in the skin to test the healing capabilities of the Zhang et al method would have been obvious in view of the teachings of Alvarez who induces keratome wounds in test animals for purposes of testing the collagen synthesis capabilities of his method.

5. Claims 17-20, 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over as applied to claims 16-18 above, and further in view of Eppstein et al USPN 5,445,611. Applicant differs in reciting specific parameters regarding the application of the phonophoresis such as frequency as well as intensity. Applicant's parameter's are well known as demonstrated in column 3 lines 30-45. The selection of applicant's phonophoretic parameter range would have

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been obviously employed in the Zhang et al device since they are merely conventional parameters known the phonophoresis art. Similarly, applicant has shown no special improvement in his electrical energy pulsing (claim 20) and would therefore be mere routine experimentation to discover the pulsing schemes that work for Zhang et al's electroporation.

6. Claims 2-13, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al as applied to claim 1 and 14 above, and further in view of Alvarez "The healing of superficial skin wounds is stimulated by external electrical current" and Doan et al "In vitro effects of therapeutic ultrasound on cell proliferation, protein synthesis and cytokine production by human fibroblasts, and monocytes" and optionally Henley USPN 5,667,487.

Zhang teaches the production of collagen as a method for healing skin and teaches the application of iontophoresis as well as ultrasound so as to provide a synergistic effect (column 4-line 8-20. While he does not teach that the currents and the ultrasound employed would stimulate collagen, it is apparent from the Alvarez and the Doan references that currents and ultrasound in the energy ranges that provide iontophoresis as well as phonophoresis also produce collagen healing. Thus, carrying out normal iontophoresis as well as ultrasound simultaneously (as additionally taught by Henley) would inherently result in collagen formation. In addition, it would be obvious to used the methods of Alvarez and Doan since they would provide the synergistic collagen formation that is desired by Zhang et al.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Bockelman whose telephone number is (703) 308-2112. The examiner can normally be reached on Monday through Friday from 9:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes, can be reached on (703) 308-5181. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3591.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

MWB

June 16, 2003


MARK BOCKELMAN
PR. OFF. EXAMINER